TCM-72V/74V/75V

SERVICE MANUAL

Photo : TCM-75V

US Model
TCM-72V/74V/75V

Canadian Model
TCM-74V

AEP Model
TCM-74V/75V

UK Model
TCM-74V

E Model
TCM-75V

Model Name Using Similar Mechanism Set	TCM-11, 15V, 21, 23V TCM-31, 32V, 33, 34V TCM-35, 37V, 71, 73	
Tape Transport Mechanism Set	TCM-72V	MT-72V-13
	TCM-74V	MT-74V-13
	TCM-75V	

SPECIFICATIONS

Recording system ····· 2-track 1-channel monaural
Frequency response ····· 150 – 6,000Hz
Speaker ····· Approx. 4.5cm (1 13/16 inches) dia.
Power output ····· 160mW (at 10% harmonic distortion)
Input ····· Microphone input jack (minijack) sensitivity 0.2mV (–72dB) for 3kΩ or lower impedance microphone.
Output ····· Earphone jack (minijack) for 8 – 300Ω earphone
Power requirements ····· 3V DC, two R6 (size AA) batteries DC IN 3V jack accepts :

• Sony AC power adaptor for use on :

US, Canadian model	AC-D2M (optional)	120V AC, 60Hz
AEP model		220V AC, 50Hz
UK model		240V AC, 50Hz
E model		120V AC, 60Hz or 220V AC, 50Hz

• Sony DCC-70 car battery cord (optional) for use with 12V car battery.

Battery life (hours)

Battery	Recording
Sony battery SUM-3 (NS)	Approx.4
Sony alkaline battery AM3 (N)	Approx.12

Dimensions ····· TCM-72V : Approx. 94.1×136.4×37.1mm (w/h/d) (3¾×5⅜×1½ inches)
TCM-74V/75V : Approx. 94.1×137.1×37.1mm (w/h/d)
(3¾×5½×1½ inches)
incl. projecting parts and controls
Weight ····· Approx. 270g (9.6oz) incl. batteris

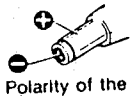
Design and specifications subject to change without notice.

US model :

Note : Use only the recommended AC power adaptor or car battery cord manufactured by Sony. Polarity of the plugs of other manufactures may be different.

Except US model :

Note : If an AC power adaptor or a car battery cord not manufactured by Sony is used, a fuse must be installed in the battery cord and the polarity of the pulg must be as illustrated.



Polarity of the Sony plug

MICROFILM

CASSETTE-CORDER

SONY®

TCM-72V/74V/75V

SERVICE MANUAL

Photo : TCM-75V

US Model
TCM-72V/74V/75V

Canadian Model
TCM-74V

AEP Model
TCM-74V/75V

UK Model
TCM-74V

E Model
TCM-75V

Model Name Using Similar Mechanism Set	TCM-11, 15V, 21, 23V TCM-31, 32V, 33, 34V TCM-35, 37V, 71, 73	
Tape Transport Mechanism Set	TCM-72V	MT-72V-13
	TCM-74V	MT-74V-13
	TCM-75V	

SPECIFICATIONS

Recording system ····· 2-track 1-channel monaural
Frequency response ····· 150 – 6,000Hz
Speaker ····· Approx, 4.5cm (1 13/16 inches) dia.
Power output ····· 160mW (at 10% harmonic distortion)
Input ····· Microphone input jack (minijack) sensitivity 0.2mV (–72dB) for 3kΩ or lower impedance microphone.
Output ····· Earphone jack (minijack) for 8 – 300 Ω earphone
Power requirements ····· 3V DC, two R6 (size AA) batteries DC IN 3V jack accepts :

• Sony AC power adaptor for use on :

US, Canadian model	AC-D2M (optional)	120V AC, 60Hz
AEP model		220V AC, 50Hz
UK model		240V AC, 50Hz
E model		120V AC, 60Hz or 220V AC, 50Hz

• Sony DCC-70 car battery cord (optional) for use with 12V car battery.

Battery life (hours)

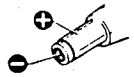
Battery	Recording
Sony battery SUM-3 (NS)	Approx.4
Sony alkaline battery AM3 (N)	Approx.12

Dimensions ····· TCM-72V : Approx. 94.1×136.4×37.1mm (w/h/d) (3¾×5⅜×1½ inches)
TCM-74V/75V : Approx. 94.1×137.1×37.1mm (w/h/d)
(3¾×5½×1½ inches)
incl. projecting parts and controls
Weight ····· Approx. 270g (9.6oz) incl. batteris

Design and specifications subject to change without notice.

US model :
Note : Use only the recommended AC power adaptor or car battery cord manufactured by Sony. Polarity of the plugs of other manufactures may be different.

Except US model :
Note : If an AC power adaptor or a car battery cord not manufactured by Sony is used, a fuse must be installed in the battery cord and the polarity of the pulg must be as illustrated.



Polarity of the Sony plug

MICROFILM

CASSETTE-CORDER

SONY®

FEATURES

- Compact size and easy operation.
- **VOR system** economizes tapes, batteries and playback time.
- You can quickly locate the desired portion that has been marked by **CUE MARKER** (TCM-75V).
- You can review the previously recorded portion with one-button operation.

What is VOR (Voice operated recording) system?
With this system, recording starts only when the sound is picked up and stops automatically when the sound is no longer detected.

What is CUE MARKER?
You mark a desired portion by **CUE MARKER** while recording. Then the beep sound will tell you a marked portion while CUE or REVIEW is being pressed during tape playback. You can easily locate the certain portion you marked.

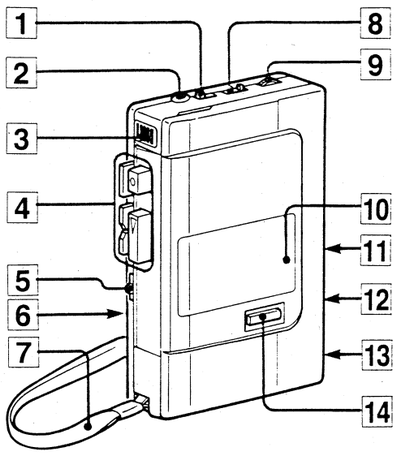
SERVICE NOTE

- **Repairing printed resistor**
  Cut both sides of the resistor and solder the carbon resistor having same value in place of printed one of the conductor side.
  1/32W carbon resistor is supplied for the replacing part of the printed resistor.

Notes on chip component replacement
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

SECTION 1
GENERAL

PARTS IDENTIFICATION



The illustration of **TCM-75V**

1. **VOR (voice operated recording) ON/OFF switch**
2. **EAR (EARPHONE) jack**
3. **Built-in microphone**
4. **Tape operation buttons**
   ● REC (record)/▼ PLAY/ ■ STOP/ ▼ FF/CUE (fast forward/cue)/ ▲ REW/REVIEW (rewind/review)
5. **PAUSE switch**
6. **Speaker** (rear)
7. **Handstrap**
8. **Tape COUNTER and reset button (TCM-74V/75V)**
   For indexing the tape contents. Before recording push the reset button to set the counter to "000".
9. **VOLUME/VOR SENS (VOR sensitivity) control**
   In playback mode: volume control
   In recording mode: VOR sensitivity control
10. **Cassette holder**
11. **MIC PLUG IN POWER (external microphone) input jack** (right side)
12. **DC IN 3 V (external power input) jack** (right side)
13. **Battery compartment** (right side)
14. **CUE MARKER button (TCM-75V)**

SECTION 2
MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:
   record/playback head — pinch roller
   erase head — rubber belts
   capstan — idlers
2. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

power supply voltage: 3V dc

Torque Measurement

Torque	Meter Reading	Torque Meter
Forward	More than 25 g-cm (More than 0.34 oz-inch)	CQ-102C
Fast Forward and Rewind	More than 60 g-cm (More than 0.83 oz-inch)	CQ-201B
Back Tension	1.5 – 4 g-cm (0.021 – 0.056 oz-inch)	CQ-102C

Tape Tension Measurement

Meter	Meter Reading
CQ-403A	More than 70 g (2.47 oz)

SECTION 3
ELECTRICAL ADJUSTMENTS

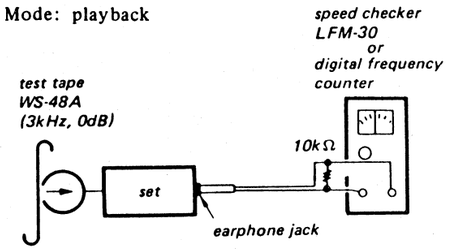
Test tape

Type	Signal	Used for
WS-48A	3kHz, 0dB	tape speed adjustment

Tape Speed Adjustment

Setting:
VOL control: mechanical mid

Procedure:
Mode: playback

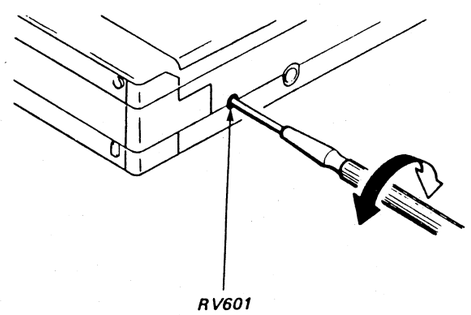


Specification:

Speed checker	Digital frequency counter
−0.5 to +1.5%	2,985 – 3,045 Hz

Frequency difference between the beginning and the end of the tape should be within 1% (30Hz).

Adjustment Location:



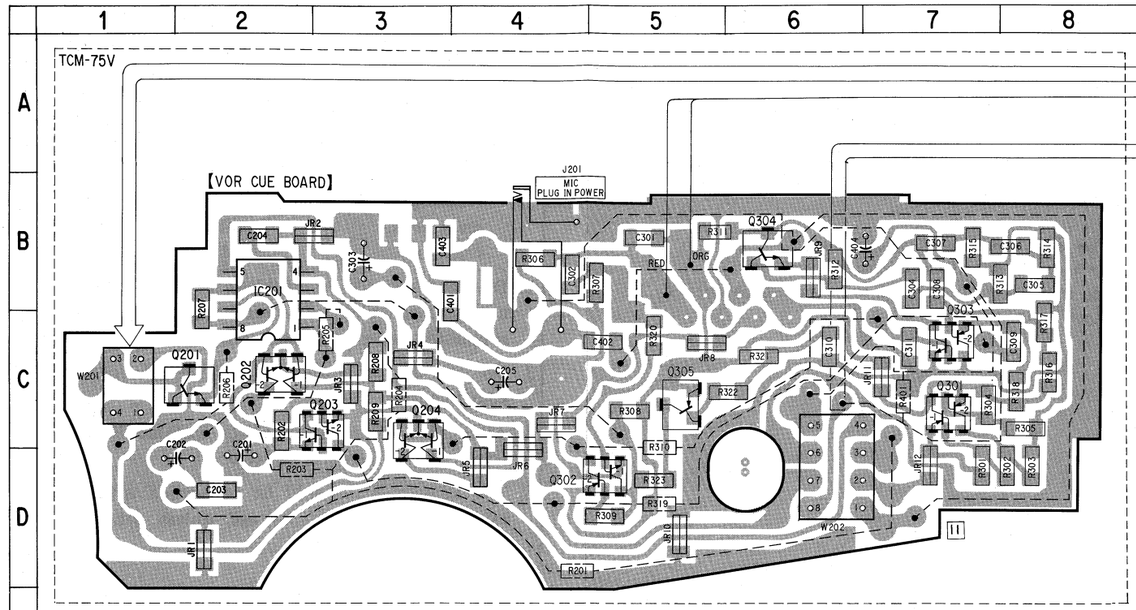
SECTION 4
DIAGRAMS

● SEMICONDUCTOR LOCATION

Ref. No.	Location
TCM-75V	
IC201	B−2
Q201	C−2
Q202	C−2
Q203	C−3
Q204	C−3
Q301	C−7
Q302	D−4
Q303	C−7
Q304	B−6
Q305	C−5
TCM-72V／74V	
IC201	F−2
Q201	F−2
Q202	F−2
Q203	G−3
COMMON	
IC101	E−15
IC601	G−20
Q101	G−11
Q102	E−12
Q503	G−10
D101	E−13
D102	E−13

Note :
- ○— : parts extracted from the component side.
- ●— : parts extracted from the conductor side.
- ■ : parts mounted on the conductor side.
- ● : Through hole.
- □ : Chip components extracted from the side which is seen.
- [ ] : Printed resistor.
- ▒ : Patten on the side which is seen.
- ●···● : Patten on the rear side.

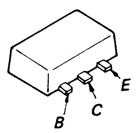
4-1. PRINTED WIRING BOARD



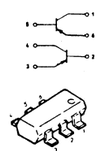
SEMICONDUCTOR LEAD LAYOUTS

LA5523

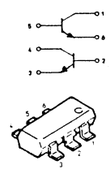
DTB113ZK



XN4401



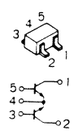
XN4601



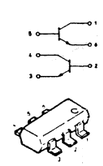
1T22A

NJM2072M
NJM2073D

XN1214

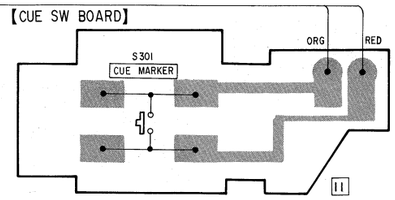


XN4501

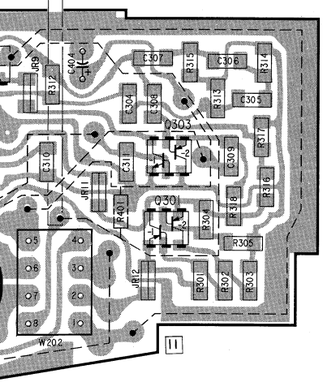


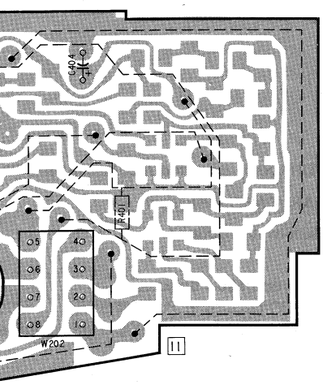
2SA1162
2SC1623
2SC2712G

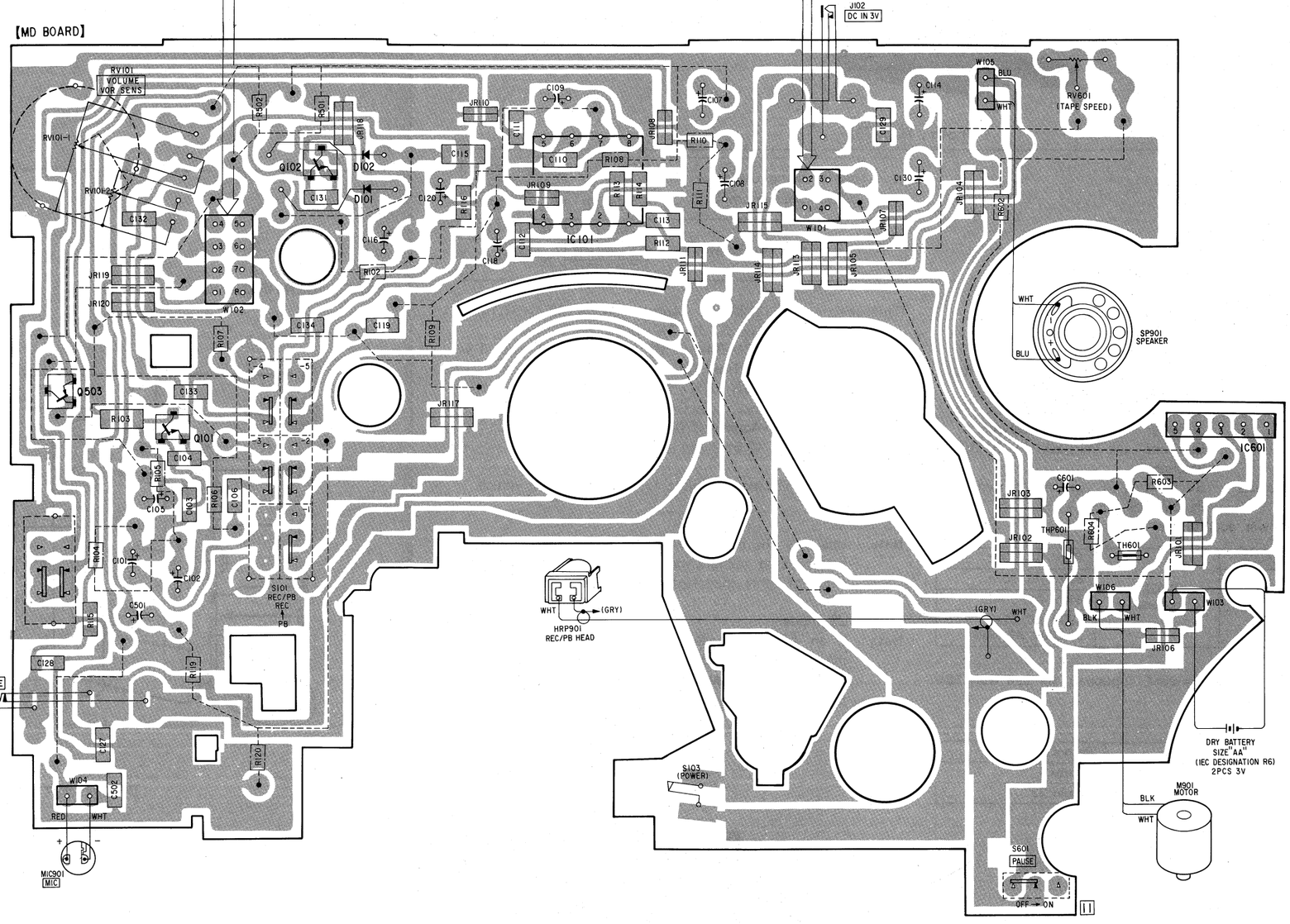
【CUE SW BOARD】



【MD BOARD】



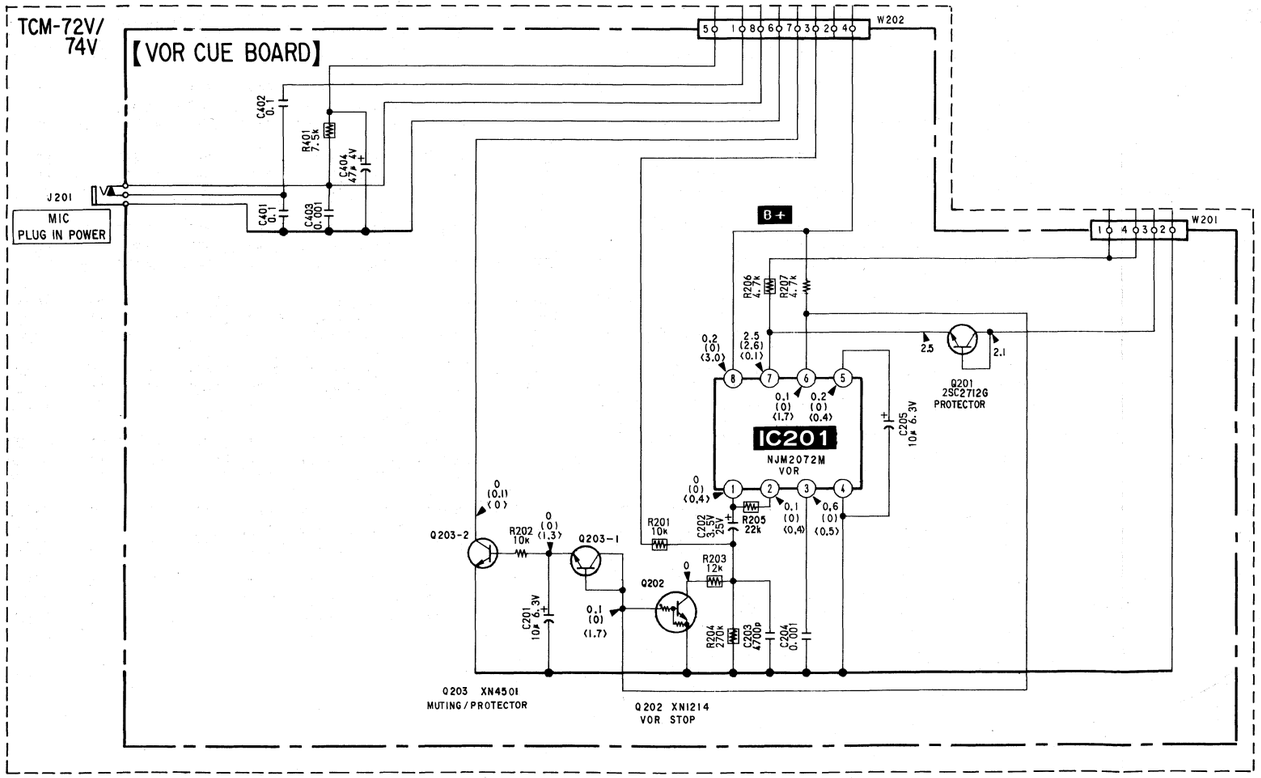


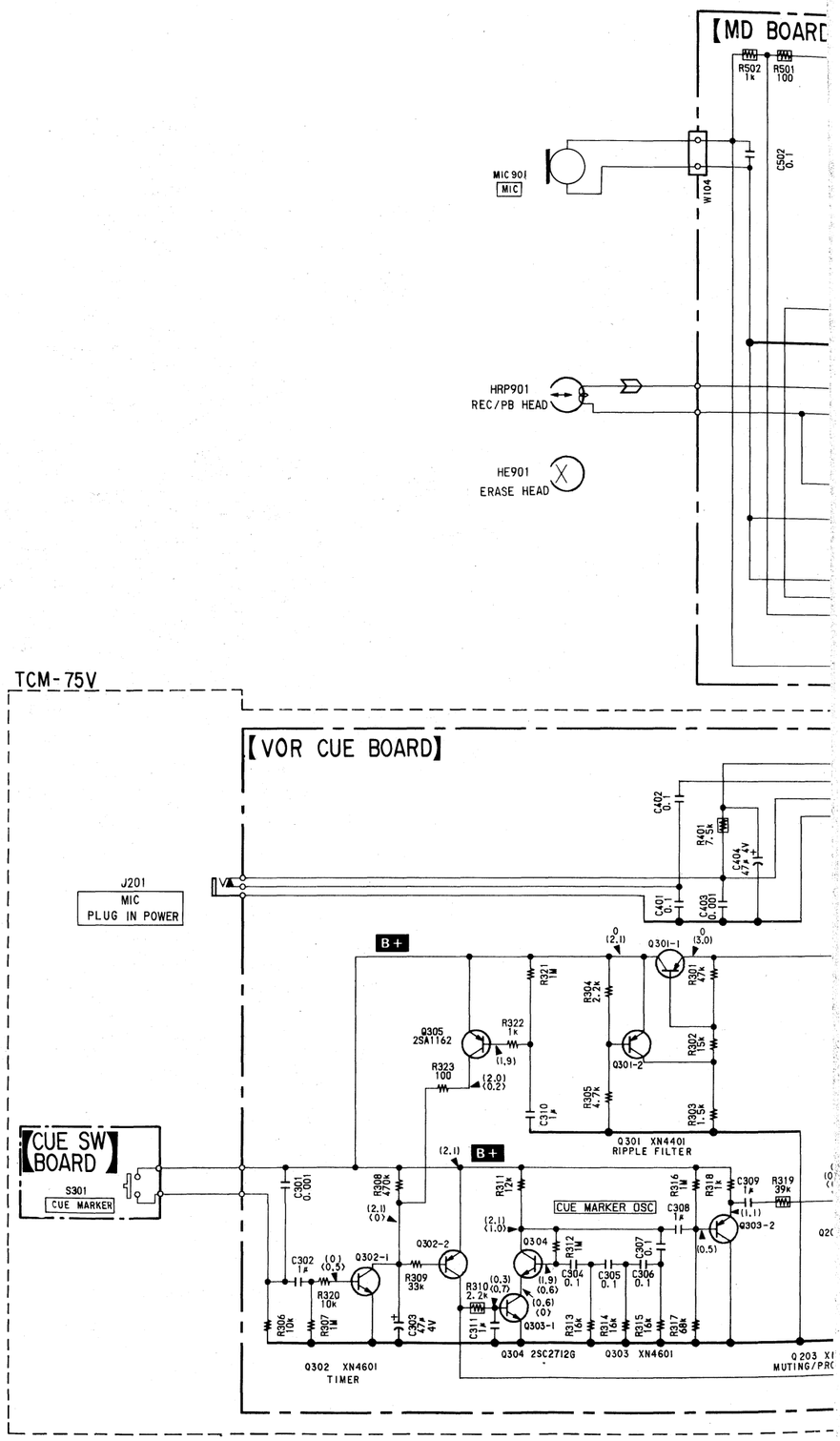


1T22A

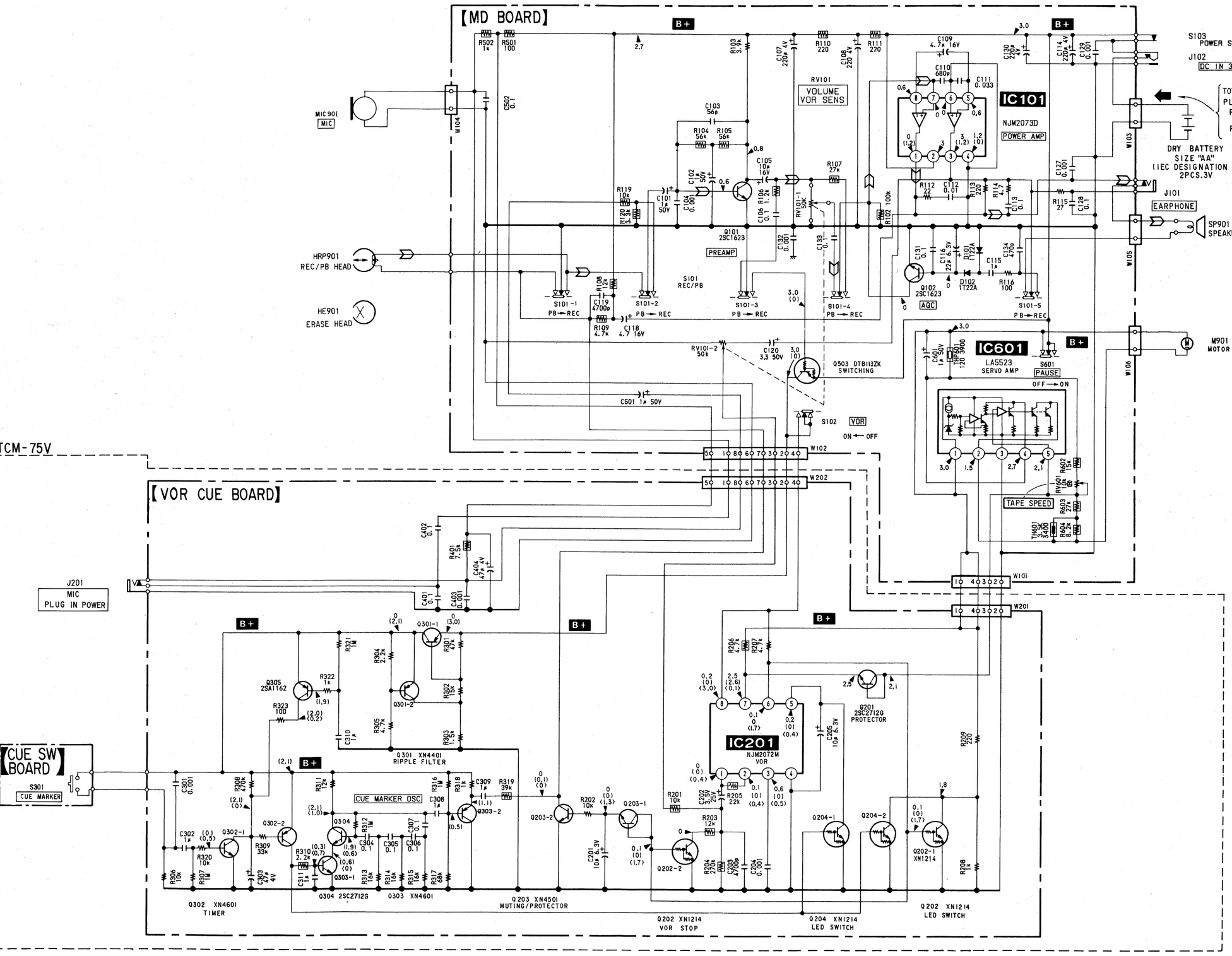
Note :

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- : printed resistor.
- B+ : B+ Line
- : adjustment for repair.
- Total current is measured with no cassette installed.
- Power voltage is dc 3V and fed with regulated dc power supply from external power voltage jack.
- no mark : PLAY
  ( ) : REC
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  : PB





10 11 12 13 14 15 16 17 18 19 20 21 22

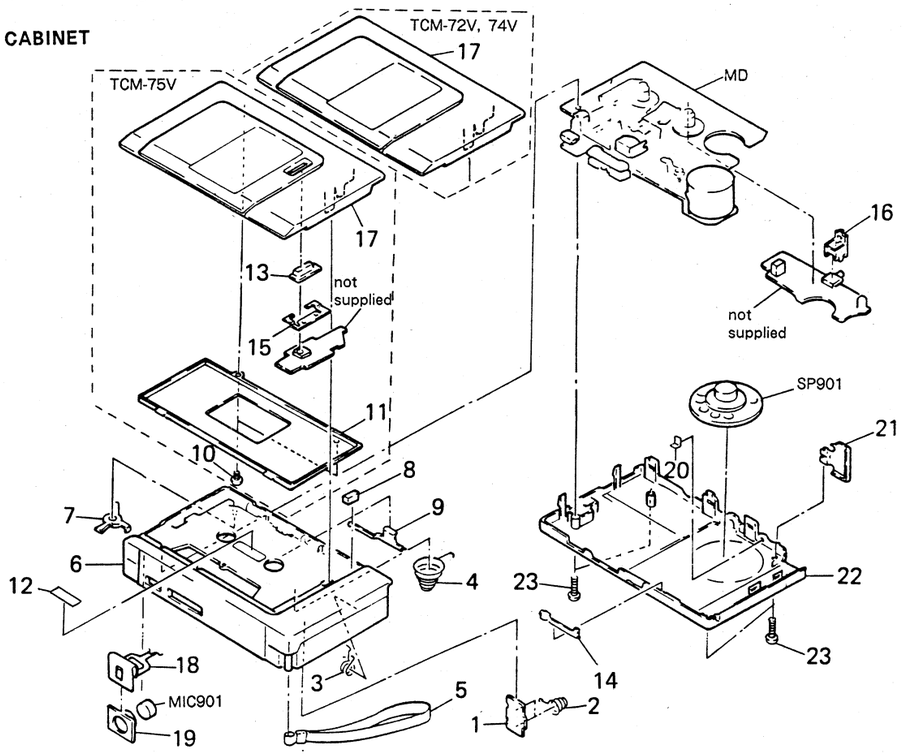


SECTION 5
EXPLODED VIEWS

NOTE:

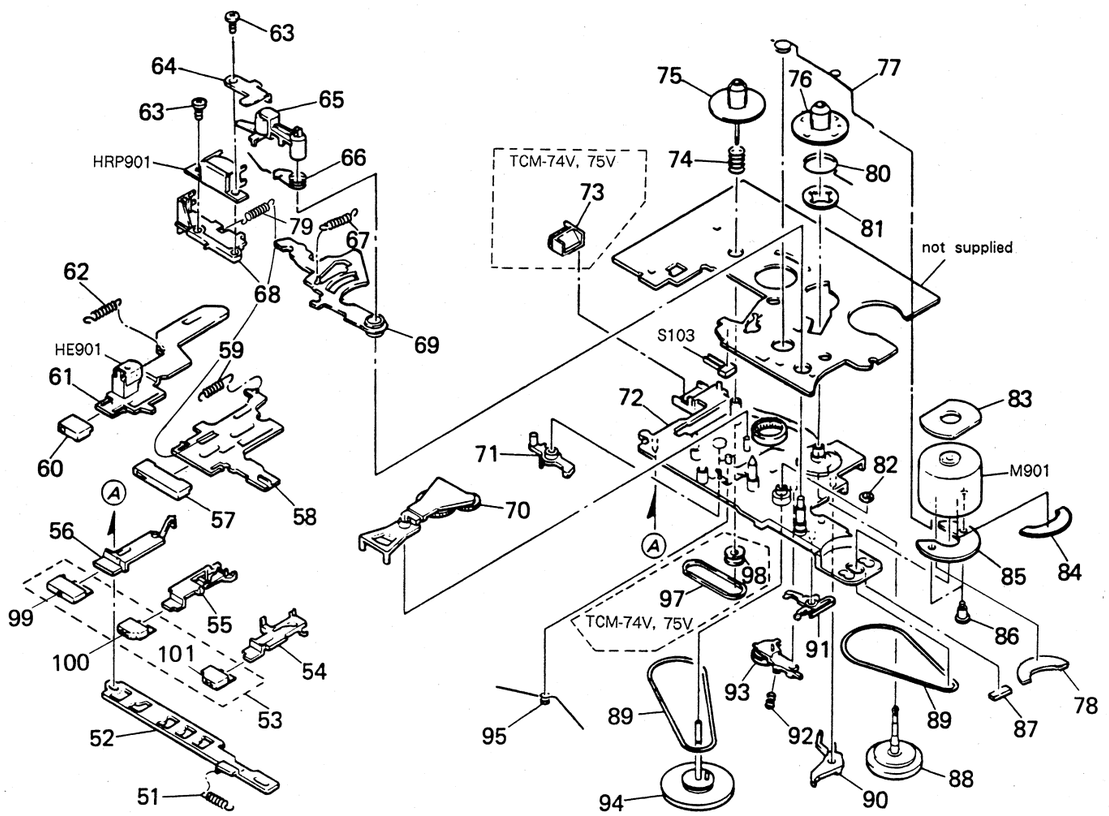
- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
  Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ Cabinet's Color ↑ Parts' Color

5-1. CABINET



No.	Part No.	Description	Remarks
1	3-352-440-01	HOLDER (BATTERY TERMINAL)	
2	3-352-439-01	SPRING	
3	3-352-433-01	SPRING	
4	3-352-437-01	SPRING (SP)	
5	3-320-982-01	STRAP, HAND	
6	3-355-369-11	(72V)...CABINET (A)	
	3-355-369-31	(74V)...CABINET (A)	
	3-355-369-41	(75V)...CABINET (A)	
7	3-320-976-01	CLAW, ERASE SAFETY	
8	*3-352-471-01	CUSHION (A)	
9	3-320-977-01	SPRING	
10	3-318-382-21	(75V)...SCREW (1.7X3), TAPPING	
11	*3-352-464-01	(75V)...HOLDER (B), MIC	
12	3-578-101-11	PLATE, ORNAMENTAL	
13	3-352-465-01	(75V)...BUTTON (CUE MARKER)	
14	3-352-432-01	KNOB, PAUSE	
15	3-352-469-01	(75V)...SPRING (CASSETTE LID B)	
16	*3-352-456-01	HOLDER, JACK	
17	X-3328-400-1	(72V)...LID ASSY, CASSETTE	
	X-3328-402-1	(75V)...LID ASSY, CASSETTE	
	X-3328-403-1	(74V)...LID ASSY, CASSETTE	
18	*3-352-434-01	HOLDER (A), MIC	
19	3-320-975-01	CUSHION (A), MICROPHONE	
20	*3-318-389-01	SHEET,CONDUCTIVE,CABINET(REAR)	
21	A-3046-076-A	LID ASSY, BATTERY CASE	
22	3-352-443-01	CABINET (B)	
23	3-335-640-51	SCREW (M2X16)	
HE901	8-825-771-21	HEAD, ERASE EBF5-36C	
HRP901	1-543-607-11	HEAD, MAGNETIC (REC/PB)	
MIC901	1-542-080-11	MICROPHONE, BUILT-IN	
M901	X-3320-925-2	MOTOR ASSY	
S103	1-570-549-21	SWITCH, LEAF (POWER)	
SP901	1-503-830-11	SPEAKER	

5-2. MD (MT-72V-13 : TCM-72V / MT-74V-13 : TCM-74V, 75V)



No.	Part No.	Description	Remarks
51	3-342-031-01	SPRING, TENSION	
52	*3-342-040-01	PLATE, LOCK	
53	3-342-079-11	BUTTON (FRS)	
54	3-320-993-01	LEVER, FF	
55	3-320-992-01	LEVER, REW	
56	3-320-994-01	LEVER, STOP	
57	3-352-446-01	BUTTON, PLAY	
58	3-352-449-01	LEVER, PLAY	
59	3-342-029-01	SPRING, TENSION (POWER TENSION)	
60	3-352-445-11	BUTTON, REC	
61	3-320-995-01	LEVER, REC	
62	3-342-032-01	SPRING, TENSION	
63	3-352-473-01	SCREW (2), TAPPING	
64	*3-352-467-01	RETAINER, LEVER	
65	X-3320-921-1	PINCH ROLLER ASSY	
66	3-352-470-01	SPRING (P), TORSION	
67	3-342-033-01	SPRING, TENSION	
68	*3-352-447-01	BASE (A), HEAD	
69	3-352-448-01	BASE (B), HEAD	
70	X-3343-311-1	ARM ASSY, FR	
71	3-342-010-01	ARM, CR	
72	X-3352-402-1	CHASSIS ASSY, MECHANICAL	
73	1-548-582-11	(74V,75V)...COUNTER, TAPE (SMALL TYPE)	
74	3-342-030-01	SPRING, COMPRESSION	
75	3-342-013-01	GEAR, S REEL	
76	3-342-014-01	GEAR, T REEL	
77	3-352-453-01	SPRING (GROUND)	
78	3-352-476-01	SHEET (MOTOR)	
79	3-352-451-01	SPRING, TENSION (POWER TENSION)	
80	3-342-024-01	SPRING	
81	3-342-055-01	WASHER, T REEL	
82	3-321-483-11	RING, RETAINING	
83	3-342-050-11	RUBBER (A), VIBRATION PROOF	
84	3-342-075-01	SPACER, MOTOR	
85	3-318-254-11	CUSHION, MOTOR	
86	3-342-076-01	SCREW (M2), PRECISION STEP	
87	9-911-839-XX	CUSHION (A)(t=1)	
88	X-3320-918-1	PLATE ASSY, REEL, TAKE-UP	
89	3-480-136-00	BELT	
90	3-342-011-01	LEVER (A), SHUT-OFF	
91	3-342-012-01	LEVER (B), SHUT-OFF	
92	3-342-034-01	SPRING, TENSION	
93	X-3320-919-1	ARM ASSY, IDLER	
94	X-3320-916-1	FLYWHEEL (PA) ASSY	
95	3-342-035-01	SPRING (FR)	
97	3-554-103-00	(74V,75V)...BELT, DRIVING	
98	3-320-999-11	(74V,75V)...PULLEY (COUNTER)	
99	3-320-989-11	BUTTON, STOP	
100	3-320-987-11	BUTTON, REW	
101	3-320-988-11	BUTTON, FF	

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA...,
UPC...: μPC, UPD...: μPD...

Ref.No.	Part No.	Description			
901	*1-563-470-11	HOUSING, CONNECTOR 2P			
C101	1-126-160-11	ELECT	1MF	20%	50V
C102	1-126-160-11	ELECT	1MF	20%	50V
C103	1-163-111-00	CERAMIC CHIP	56PF	5%	50V
C104	1-163-009-11	CERAMIC CHIP	0.001MF		50V
C105	1-126-157-11	ELECT	10MF	20%	16V
C106	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C107	1-124-434-00	ELECT	220MF	20%	4V
C108	1-124-434-00	ELECT	220MF	20%	4V
C109	1-126-094-11	ELECT	4.7MF	20%	16V
C110	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C111	1-163-034-00	CERAMIC CHIP	0.033MF		50V
C112	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C113	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C114	1-124-434-00	ELECT	220MF	20%	4V
C115	1-162-638-11	CERAMIC CHIP	1MF		16V
C116	1-126-153-11	ELECT	22MF	20%	6.3V
C118	1-126-094-11	ELECT	4.7MF	20%	16V
C119	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C120	1-126-162-11	ELECT	3.3MF	20%	50V
C127	1-163-009-11	CERAMIC CHIP	0.001MF		50V
C128	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C129	1-163-009-11	CERAMIC CHIP	0.001MF		50V
C130	1-124-434-00	ELECT	220MF	20%	4V
C131	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C132	1-163-009-11	CERAMIC CHIP	0.001MF		50V
C133	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C134	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C201	1-126-157-11	ELECT	10MF	20%	6.3V
C202	1-126-162-11	ELECT	3.3MF	20%	25V
C203	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C204	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C205	1-126-157-11	ELECT	10MF	20%	6.3V
C301	1-163-009-11	(75V)...CERAMIC CHIP	0.001MF		50V
C302	1-164-346-11	(75V)...CERAMIC CHIP	1MF		16V
C303	1-124-432-00	(75V)...ELECT	47MF	20%	4V
C304	1-164-004-11	(75V)...CERAMIC CHIP	0.1MF	10%	25V
C305	1-164-004-11	(75V)...CERAMIC CHIP	0.1MF	10%	25V
C306	1-164-004-11	(75V)...CERAMIC CHIP	0.1MF	10%	25V
C307	1-164-004-11	(75V)...CERAMIC CHIP	0.1MF	10%	25V
C308	1-164-346-11	(75V)...CERAMIC CHIP	1MF		16V
C309	1-164-346-11	(75V)...CERAMIC CHIP	1MF		16V
C310	1-164-346-11	(75V)...CERAMIC CHIP	1MF		16V
C311	1-164-346-11	(75V)...CERAMIC CHIP	1MF		16V
C401	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C402	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C403	1-163-009-11	CERAMIC CHIP	0.001MF		50V
C404	1-124-432-00	ELECT	47MF	20%	4V
C501	1-124-438-00	ELECT	1MF	20%	50V
C502	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C601	1-124-438-00	ELECT	1MF	20%	50V
D101	8-719-022-21	DIODE 1T22A			
D102	8-719-022-21	DIODE 1T22A			
HE901	8-825-771-21	HEAD, ERASE EBF5-36C			
HRP901	1-543-607-11	HEAD, MAGNETIC (REC/PB)			
IC101	8-759-701-54	IC NJM2073D			
IC201	8-759-701-51	IC NJM2072M			
IC601	8-759-801-12	IC LA5523			
J101	1-566-740-11	JACK (EARPHONE)			
J102	1-568-228-11	JACK, EXTERNAL POWER (DC IN 3V)			
J201	1-563-319-21	JACK (MIC/PLUG IN POWER)			
JR1	1-216-295-00	(75V)...METAL GLAZE	0	5%	1/10W
JR2	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR3	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR4	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR5	1-216-295-00	(75V)...METAL GLAZE	0	5%	1/10W
JR6	1-216-296-00	(75V)...METAL GLAZE	0	5%	1/8W
JR7	1-216-295-00	(75V)...METAL GLAZE	0	5%	1/10W
JR8	1-216-295-00	(75V)...METAL GLAZE	0	5%	1/10W
JR9	1-216-295-00	(75V)...METAL GLAZE	0	5%	1/10W
JR10	1-216-296-00	(75V)...METAL GLAZE	0	5%	1/8W
JR11	1-216-295-00	(75V)...METAL GLAZE	0	5%	1/10W
JR12	1-216-295-00	(75V)...METAL GLAZE	0	5%	1/10W
JR101	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR102	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR103	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR104	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR105	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR106	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR107	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR108	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR109	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR110	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR111	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR113	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR114	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR115	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR117	1-216-296-00	METAL GLAZE	0	5%	1/8W

Ref.No.	Part No.	Description			
JR118	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR119	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR120	1-216-296-00	METAL GLAZE	0	5%	1/8W
M901	X-3320-925-2	MOTOR ASSY			
MIC901	1-542-080-11	MICROPHONE, BUILT-IN			
Q101	8-729-100-66	TRANSISTOR 2SC1623			
Q102	8-729-100-66	TRANSISTOR 2SC1623			
Q201	8-729-271-22	TRANSISTOR 2SC2712G			
Q202	8-729-420-16	TRANSISTOR XN1214			
Q203	8-729-402-81	TRANSISTOR XN4501			
Q204	8-729-420-16	(75V)...TRANSISTOR XN1214			
Q301	8-729-403-27	(75V)...TRANSISTOR XN4401			
Q302	8-729-402-84	(75V)...TRANSISTOR XN4601			
Q303	8-729-402-84	(75V)...TRANSISTOR XN4601			
Q304	8-729-271-22	(75V)...TRANSISTOR 2SC2712G			
Q305	8-729-216-22	(75V)...TRANSISTOR 2SA1162			
Q503	8-729-904-60	TRANSISTOR DTB113ZK			
R102	1-249-441-11	CARBON	100K	5%	1/4W
R103	1-216-212-00	METAL GLAZE	3.9K	5%	1/8W
R104	1-249-438-11	CARBON	56K	5%	1/4W
R105	1-249-438-11	CARBON	56K	5%	1/4W
R106	1-249-418-11	CARBON	1.2K	5%	1/4W
R107	1-249-434-11	CARBON	27K	5%	1/4W
R108	1-249-430-11	CARBON	12K	5%	1/4W
R109	1-249-425-11	CARBON	4.7K	5%	1/4W
R110	1-249-409-11	CARBON	220	5%	1/4W
R111	1-249-409-11	CARBON	220	5%	1/4W
R112	1-216-009-00	METAL GLAZE	22	5%	1/10W
R113	1-216-033-00	METAL GLAZE	220	5%	1/10W
R114	1-216-308-00	METAL GLAZE	4.7	5%	1/10W
R115	1-216-011-00	METAL GLAZE	27	5%	1/10W
R116	1-216-025-00	METAL GLAZE	100	5%	1/10W
R119	1-249-429-11	CARBON	10K	5%	1/4W
R120	1-249-423-11	CARBON	3.3K	5%	1/4W
R201	1-249-429-11	CARBON	10K	5%	1/4W
R202	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R203	1-249-430-11	CARBON	12K	5%	1/4W
R204	1-215-479-00	METAL	270K	1%	1/6W
R205	1-249-433-11	CARBON	22K	5%	1/4W
R206	1-249-425-11	CARBON	4.7K	5%	1/4W
R207	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R208	1-216-049-00	(75V)...METAL GLAZE	1K	5%	1/10W
R209	1-216-033-00	(75V)...METAL GLAZE	220	5%	1/10W
R301	1-216-089-00	(75V)...METAL GLAZE	47K	5%	1/10W
R302	1-216-077-00	(75V)...METAL GLAZE	15K	5%	1/10W
R303	1-216-053-00	(75V)...METAL GLAZE	1.5K	5%	1/10W
R304	1-216-057-00	(75V)...METAL GLAZE	2.2K	5%	1/10W
R305	1-216-065-00	(75V)...METAL GLAZE	4.7K	5%	1/10W
R306	1-216-073-00	(75V)...METAL GLAZE	10K	5%	1/10W
R307	1-216-121-00	(75V)...METAL GLAZE	1M	5%	1/10W
R308	1-216-113-00	(75V)...METAL GLAZE	470K	5%	1/10W
R309	1-216-085-00	(75V)...METAL GLAZE	33K	5%	1/10W
R310	1-249-421-11	(75V)...CARBON	2.2K	5%	1/4W
R311	1-216-075-00	(75V)...METAL GLAZE	12K	5%	1/10W
R312	1-216-121-00	(75V)...METAL GLAZE	1M	5%	1/10W
R313	1-216-078-00	(75V)...METAL GLAZE	16K	5%	1/10W

Ref.No.	Part No.	Description			
R314	1-216-078-00	(75V)...METAL GLAZE	16K	5%	1/10W
R315	1-216-078-00	(75V)...METAL GLAZE	16K	5%	1/10W
R316	1-216-121-00	(75V)...METAL GLAZE	1M	5%	1/10W
R317	1-216-093-00	(75V)...METAL GLAZE	68K	5%	1/10W
R318	1-216-049-00	(75V)...METAL GLAZE	1K	5%	1/10W
R319	1-249-436-11	(75V)...CARBON	39K	5%	1/4W
R320	1-216-073-00	(75V)...METAL GLAZE	10K	5%	1/10W
R321	1-216-121-00	(75V)...METAL GLAZE	1M	5%	1/10W
R322	1-216-049-00	(75V)...METAL GLAZE	1K	5%	1/10W
R323	1-216-025-00	(75V)...METAL GLAZE	100	5%	1/10W
R401	1-215-442-00	METAL	7.5K	5%	1/6W
R501	1-249-405-11	CARBON	100	5%	1/4W
R502	1-249-417-11	CARBON	1K	5%	1/4W
R602	1-249-431-11	CARBON	15K	5%	1/4W
R603	1-249-434-11	CARBON	27K	5%	1/4W
R604	1-249-428-11	CARBON	8.2K	5%	1/4W
RV101	1-237-772-11	RES, VAR, CARBON 50K/50K (VOLUME/VOR SENS)			
RV601	1-237-278-11	RES, ADJ, CARBON 10K (TAPE SPEED)			
S101	1-571-151-11	SWITCH, SLIDE (REC/PB)			
S102	1-571-478-11	SWITCH, SLIDE (VOR)			
S103	1-570-549-21	SWITCH, LEAF (POWER)			
S301	1-571-887-21	(75V)...SWITCH, KEY BOARD (CUE MARKER)			
S601	1-570-675-11	SWITCH, SLIDE (PAUSE)			
SP901	1-503-830-11	SPEAKER			
TH601	1-808-980-11	THERMISTOR			
THP601	1-808-272-11	THERMISTOR, POSITIVE (120)			
W101	*1-568-289-11	PIN, CONNECTOR (PC BOARD) 4P			
W102	*1-566-669-11	PIN, CONNECTOR (PC BOARD) 8P			
W103	*1-506-984-11	PIN, CONNECTOR (PC BOARD) 2P			
W104	*1-506-984-11	PIN, CONNECTOR (PC BOARD) 2P			
W105	*1-506-984-11	PIN, CONNECTOR (PC BOARD) 2P			
W106	*1-506-984-11	PIN, CONNECTOR (PC BOARD) 2P			
W201	*1-563-317-31	SOCKET, CONNECTOR(PC BOARD) 4P			
W202	*1-563-318-31	SOCKET, CONNECTOR(PC BOARD) 8P			

ACCESSORY & PACKING MATERIAL

3-351-508-01	TUBE, PROTECTION
*3-355-377-01	(US)...CUSHION (UPPER)
*3-355-347-01	(US)...CUSHION (LOWER)
*3-355-350-01	(EXCEPT US)...CUSHION
*3-355-360-01	(74V:Canadian,AEP,UK)..INDIVIDUAL CARTON
*3-355-362-01	(75V:AEP,E).....INDIVIDUAL CARTON
3-751-512-11	(EXCEPT US)...MANUAL, INSTRUCTION (ENGLISH,FRENCH,SPANISH,PORTUGUESE)
3-751-512-21	(US)....MANUAL, INSTRUCTION (ENGLISH)
3-751-512-41	(AEP)...MANUAL, INSTRUCTION (GERMAN,DUTCH,SWEDISH,ITALIAN)